

**Testimony of**  
**David Blittersdorf**  
**NRG Systems (founder) &**  
**Earth Turbines (CEO)**  
**of Hinesburg, VT**

**before the**  
**Senate Committee on Environment and Public Works**

**The Honorable Bernard Sanders (I-VT)**  
**&**  
**The Honorable Barbara Boxer (D-CA)**  
**Chairman**

**September 25, 2007**

## TESTIMONY OF DAVID BLITTERSDORF

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### U.S. SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

Senator Sanders, Chairman Boxer, Ranking Member Inhofe and members of the committee, my name is David Blittersdorf and I am the founder of NRG Systems and CEO of Earth Turbines. Both companies are based in Hinesburg, Vermont. NRG is the leading manufacturer of wind measurement systems and wind turbine control sensors for the utility-scaled wind industry worldwide, and Earth Turbines is a manufacturer of small wind turbines for home and community use in the U.S. By growing the renewable energy industry, we have a huge opportunity today both to address global warming and to create “green” jobs here in America.

#### *Large-scale wind*

I founded NRG in 1982, with only one employee...me, and now its products can be found on every continent in more than 120 countries, serving electric utilities, wind farm developers, research institutes, government agencies, and universities. A company such as NRG, in a small rural community such as Hinesburg, Vermont, that provides highly skilled well-paid jobs, has a ripple effect on the community, state and region. Today, under the leadership of my wife Jan Blittersdorf, NRG is experiencing growth of over 40% per year, and with the twin threats of global warming and peaking of world oil production, we are implementing plans to accommodate 40% or more growth in business for the foreseeable future. Today NRG's staff work in a three-year old, 46,000-square-foot world-class energy efficient and renewable energy powered LEED gold certified building. A 30,000 square foot addition is under construction now.

Today's typical utility-scale wind turbine can generate as much as two megawatts of electricity, or enough power to meet the needs of about 540 households. It is also interesting to note that:

- A single utility-scale wind turbine avoids the same amount of carbon dioxide as is emitted by about 4,800 cars.
- In 1998 wind energy produced enough electricity to power about 500,000 homes. Today, turbines operating in about 30 states produce the amount of electricity needed to power about 3 million American homes – or about that used by the entire population of the state of Virginia, reducing the need for fossil fuel electricity generation.
- While wind supplies only about 1 percent of America's electricity today, even critics agree that wind could supply fully 20 percent of our electricity needs, further reducing our dependence on foreign oil.
- The Statue of Liberty's torch is powered through a purchase of wind energy.
- Starbucks, Safeway, and Staples are all purchasing wind-generated electricity.

- Examples of wind energy jobs include 500 workers building towers at Beird Industries in Shreveport, LA, about 1000 new jobs coming to a just announced tower manufacturing plant in Tulsa, OK, and five new wind energy businesses in Chattanooga, TN.
- Small wind turbines are sold in every state and exports account for almost one-half of all US manufacturers' sales.
- Wind contributes in ways beyond creating jobs and combating global warming. Wind developers pay about \$5,000 per turbine, per year for 20 years in lease payments to hard-pressed farmers, ranchers and other landowners from Maple Ridge, NY to Abilene, TX. Wind projects also make significant contributions to the local tax base of many rural communities.
- When wind energy displaces fossil fuel, it not only reduces the associated emissions but also conserves water and puts downward pressure on fuel prices. Every megawatt-hour of wind energy that displaces fossil fuel will conserve 100 to 500 gallons of water. Wind energy often displaces natural gas, and reduced demand for natural gas helps insulate customers from price spikes. A recent report from Wood Mackenzie, a power and gas research firm, showed that an increase in renewable energy from a Renewable Portfolio Standard could reduce natural gas prices by 15-20% over the next 20 years.

In 2005, the U.S. became the world's largest market for new wind energy after a decade of falling behind the strong markets of Germany and Spain. Policies aimed at grabbing onto this market by building skilled workers and new supply chains could be a boon to U.S. manufacturing which has lost over 2.5 million jobs between 2001 and 2004.

Here is a snapshot of new "green" jobs being created by the wind industry:

**Minnesota:** In the town of Pipestone, the one-year old Suzlon wind turbine manufacturing plant employs 275 people.

**Iowa:** Last December, the announcement of plans by Siemens Corp. to open a wind tower manufacturing facility in Fort Madison brought 2,600 people to job fairs to compete for 200 jobs.

**Tennessee:** Chattanooga based Aerisyn, another tower manufacturer, recently invested \$7 million and brought economic activity and 130 employees to a once empty warehouse.

**Arkansas:** LM Glasfiber, a builder of wind turbine blades, is building its second plant in the U.S. and creating 1000 new jobs in Little Rock. LM's existing plant in Grand Forks, ND already provides 750 jobs.

**Oklahoma:** This year, DMI Industries is opening a tower manufacturing plant in Tulsa, creating up to 450 jobs. This is in addition to 100 jobs already in place at Tulsa's Trinity Structural Towers plant. Bergey Windpower in Norman is a leading small wind turbine manufacturer who has recently expanded into a new facility.

**Michigan:** Since 2001, Michigan has lost 130,000 manufacturing jobs, many of which were in the auto industry. Earlier this month at a manufacturing conference in Lansing, Governor Jennifer Granholm told participants that renewable energy projects will help re-build Michigan's

economy and create jobs. The Governor stated that “In the 20th century, Michigan was the state that put the nation and world on wheels. In the 21st century, we want to be the state that leads our nation to sustainable energy independence.”

With proper and clear support for renewable energy, the potential growth of the wind industry could create tens of thousands of new manufacturing jobs and hundreds of thousands of jobs across the industry.

### ***Small wind***

With Jan running NRG, I am building our second “green” business, Earth Turbines focused on small wind turbines for individual homes, farms and small businesses. Earth Turbines is just starting up and after almost 30 years of our wind energy experience, we hope to become a leading home wind turbine manufacturer for North America in the near future.

The home wind energy industry is small and has been crippled in the past by the low cost of fossil fuels, lack of federal incentives and non-supportive policy at the local, state and federal levels. Investment to jump-start this important segment of the wind industry is appearing but strong signals in the form of incentives and supportive policy at the federal level is an absolute necessity.

The Rural Electrification Administration (REA), created in 1935, is an example of success in bringing the benefits of grid electricity to farmers and rural communities. Before the REA, most rural residents either went without electricity or generated their own with wind power. I have met many folks who remember that Dad or Grandpa put in a wind generator to power the family radio and a few lights. Over a million wind electric generators were sold in the early to mid 1900’s, but this growing industry was silenced by the mid 1950’s by the success of the REA. It is time to re-power rural America with home, farm and community-scale grid connected wind energy.

The small wind turbine industry is poised for tremendous growth. The technology is “Made in the USA” and the market is asking for products. Today’s home wind turbine production is measured in the hundreds of turbines per year but the market potential is in the hundreds of thousands per year. Volume production of a home size wind system could lower the cost from \$25,000 today to under \$15,000 in five years, making renewable energy a viable option for households across America. With effective government policies and incentives in place, the US small wind industry could grow at 40-60% per year compared to 14-25% now.

### ***Next steps***

To realize this opportunity we must take bold steps to invest in renewable energy through extensions of the renewable energy tax credits and bonds, specifically:

- 1) A full value, long term renewable energy Production Tax Credit (or PTC) which expires December 31, 2008

- 2) An Investment Tax Credit for small wind systems used to power homes, farms, and small businesses, and
- 3) Clean Renewable Energy Bonds for non-taxpaying, public power entities.
- 4) A nation-wide renewable energy requirement of at least 15% by the year 2020. (i.e., a Renewable Electricity Standard, RES or Renewable Portfolio Standard., RPS.)
- 5) A national “net metering” law so that small wind turbines can connect to the grid in a simple and fair way without roadblocks from local power companies.
- 6) Group net metering so groups of utility customers to jointly own a larger wind turbine and share its output.

I will expand a bit on the last two items because you may be unfamiliar with them. Net metering is the modern way to have our society work together in distributed wind and solar electricity generation. Power is generated at the point of use and is shared by all customers on our electrical grid. It is time for standardized countrywide Net Metering; Thirty-two states have put net metering into law, but the rules are not consistent. We also need to facilitate Group Net Metering, which allows a group of customers of a utility to jointly own a larger wind turbine and share its output around their community homes, farms and businesses.

### **Conclusion**

NRG and Earth Turbines represent only a piece of the growing wind industry, which is becoming a larger source of domestic energy production while producing hundreds of thousands of new jobs.

To keep providing new “green” jobs, spurring rural economic development and addressing global warming, the wind industry, both large scale and small, needs Congress to send the kind of strong signals through the policies that I have sketched out. To really address our energy and environmental problems, legislation such as S.309 Global Warming Pollution Reduction Act sponsored by Senator Sanders is necessary.

We all ask Congress act boldly and swiftly so that we can keep wind component factories humming from Shreveport, Louisiana to Hinesburg, Vermont. Wind developers will also keep making much-needed land rental payments to farmers and ranchers, from Maple Ridge, NY to Abilene, TX, all the while producing hundreds of thousands of new “green” jobs. I have done this and my wife Jan has done it too. I know that our country can do even more.

Thank you,

David Blittersdorf